

What is claimed is:

1. An emergency information terminal mounted in a vehicle having a main battery, for executing an emergency call notifying process to a center supervising a emergency information system, said emergency information terminal comprising:

a first power supply circuit coupled to said main battery for supplying power; and

a second power supply circuit coupled to said main battery for supplying power.

2. The emergency information terminal of claim 1, further comprising a controller operable to detect abnormality of said first and second power supply circuits.

3. The emergency information terminal of claim 2, wherein said controller is operable to detect at least one of drop of an output voltage of each of said first and second power supply circuits and drop of an output voltage of said main battery.

4. The emergency information terminal of claim 2, wherein said controller is operable to detect the abnormality when the drop of the output voltage of each of said first and second power supply circuits less than or equal to a predetermined voltage.

5. The emergency information terminal of claim 2, wherein said controller is operable to detect the abnormality of said first and second power supply circuits by comparing the output voltage of said main battery and the

output voltage of each of said first and second power supply circuits.

6. The emergency information terminal of claim 5, wherein said controller is operable to detect the abnormality of said first and second power supply circuits when the output voltage of each said first and second power supply circuits drops less than or equal to a predetermined voltage while the output voltage of said main battery is over a predetermined voltage.

7. The emergency information terminal of claim 2, wherein said controller is operable to inform a user of the abnormality when detecting the abnormality.

8. The emergency information terminal of claim 2, wherein said controller is operable to record the abnormality as abnormality history data when detecting the abnormality.

9. The emergency information terminal of claim 8, wherein said controller is operable to issue the abnormality history data to outside.

20 10. The emergency information terminal of claim 1,
wherein said first power supply circuit usually supplies power, and
wherein said controller is operable to have said second power supply
circuit supply power when detecting at least one of drop of an output voltage
of said first power supply circuit and drop of an output voltage of said main
25 battery.

11. The emergency information terminal of claim 10, wherein said

controller is operable to cut off said first power supply circuit when detecting at least one of the drop of the output voltage of said first power supply circuit and the drop of the output voltage of said main battery.

5 12. The emergency information terminal of claim 11, wherein said controller is operable to cut off said second power supply circuit, and to have said first power supply circuit supply power when detecting that said first power supply circuit is restored normally while said second power supply circuit supplies power.

10 13. The emergency information terminal of claim 12, wherein said controller is operable to detect that said first power supply circuit is restored normally when the output voltage of said first power supply circuit rises over a predetermined voltage.

15 14. The emergency information terminal of claim 10, wherein said controller is operable to have said first power supply circuit continue to supply power when detecting at least one of the drop of the output voltage of said first power supply circuit and the drop of the output voltage of said main battery.

20 15. The emergency information terminal of claim 14, wherein said controller is operable to cut off said second power supply circuit when detecting that said first power supply is restored normally while said second power supply circuit supplies power.

25 16. The emergency information terminal of claim 15, wherein said

controller is operable to detect that said first power supply circuit is restored normally when the output voltage of said first power supply circuit rises over a predetermined voltage.

5 17. The emergency information terminal of claim 10, wherein said controller is operable to have said second power supply circuit supply power when detecting one of the drop of the output voltage of said first power supply circuit less than or equal to a first predetermined voltage and the drop of the output voltage of said main battery less than or equal to a second predetermined voltage.

10 18. The emergency information terminal of claim 1, wherein said first and second power supply circuits usually supply power, and

15 wherein said second power supply circuit supplies power when an output of said first power supply circuit is interrupted.

19. The emergency information terminal of claim 1, further comprising:

20 a controller operable to control entirely; and
 an internal circuit other than said controller.

20. The emergency information terminal of claim 19, wherein said first power supply circuit usually supplies power to said controller and said internal circuit, and

25 wherein said second power supply circuit supplies power to said controller when an output voltage of said first power supply circuit is

lowered.

21. The emergency information terminal of claim 19,
wherein said first power supply circuit supplies power to said
5 controller and said internal circuit, and
wherein said second power supply circuit supplies power to said
controller.

22. The emergency information terminal of claim 1, further
10 comprising:

a sub controller operable to control communications with an external
device, and
a main controller operable to control other than the communications
with said external device.

15 23. The emergency information terminal of claim 22,
wherein said first power supply circuit supplies power to said main
controller, and
wherein said second power supply circuit supplies power to said sub
20 controller.

25 24. The emergency information terminal of claim 22, wherein said
first and second power supply circuits supply power to said main controller
and said sub controller.

25. The emergency information terminal of claim 22,
wherein said first power supply circuit supplies power to said main

controller and said sub controller, and

wherein said second power supply circuit supplies power to said main controller.

5 26. The emergency information terminal of claim 22,

wherein said first power supply circuit supplies power to said main controller and said sub controller, and

wherein said second power supply circuit supplies power to said sub controller.

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27. The emergency information terminal of claim 22, wherein said main controller is operable to monitor an operation of said first and second power supply circuits.

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28. The emergency information terminal of claim 27, wherein said main controller is operable to detect abnormality when an output voltage of each of said first and second power supply circuits drops less than or equal to, a predetermined voltage.

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29. The emergency information terminal of claim 28, wherein said main controller is operable to inform a user of the abnormality when detecting the abnormality.

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30. The emergency information terminal of claim 28, wherein said main controller is operable to record the abnormality as abnormality history data when detecting the abnormality.

31. The emergency information terminal of claim 30, wherein said main controller is operable to issue the abnormality history data to outside.

5 32. The emergency information terminal of claim 22, wherein said sub controller is operable to monitor an operation of said first and second power supply circuits.

10 33. The emergency information terminal of claim 22, wherein said main controller and sub controller are operable to monitor an operation of said first and second power supply circuits.

15 34. The emergency information terminal of claim 22, wherein said first power supply circuit supplies power to said sub controller, and wherein said main controller is operable to monitor an operation of said first power supply circuit.

20 35. The emergency information terminal of claim 22, wherein said first power supply circuit supplies power to said main controller, and wherein said sub controller is operable to monitor an operation of said first power supply circuit.

25 36. The emergency information terminal of claim 22, wherein said first power supply circuit supplies power to said main controller, and wherein said main controller is operable to monitor an operation of

said first power supply circuit, and to output a result of monitoring the operation to said sub controller.

37. The emergency information terminal of claim 22,
5 wherein said first power supply circuit supplies power to said sub controller, and

wherein said sub controller is operable to monitor an operation of said first power supply circuit, and to output a result of monitoring the operation to said main controller.

10 38. The emergency information terminal of claim 22, wherein said main controller includes a control circuit including a microcomputer.

15 39. The emergency information terminal of claim 22, wherein said sub controller includes a control circuit including a microcomputer.

40. An emergency information terminal mounted in a vehicle having a main battery, said emergency information terminal being capable of connecting an external device, for executing an emergency call notifying 20 process to a center supervising an emergency information system, said emergency information terminal comprising:

first and second power supply circuits for supplying power;
a sub controller operable to control communications with said external device; and

25 a main controller operable to control other than the communications with said external device,

wherein said first power supply circuit usually supplies power to said

main controller and sub controller, and

wherein said second power supply circuit supplies power to said main controller and sub controller when said main controller detects abnormality of said first power supply circuit.

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41. The emergency information terminal of claim 40, further comprising an auxiliary battery,

wherein said main battery usually supplies power to said first and second power supply circuits,

wherein said main controller and sub controller are operable to monitor each other,

wherein said main controller is operable to monitor an output voltage of said main battery, and

wherein said auxiliary battery supplies power to said first and second power supply circuits when said main controller detects abnormality in the output voltage of said main battery.

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42. The emergency information terminal of claim 41, wherein said main controller is operable to inform a user that said auxiliary battery supplies power to said first and second power supply circuits by controlling an indicator to light or flicker.

43. The emergency information terminal of claim 41,

wherein said main controller and sub controller are operable to communicate each other, and

wherein said sub controller is operable to detect abnormality in said main controller when failing to communicate with said main controller, and

to inform a user of the abnormality by controlling an indicator to light or flicker.

44. The emergency information terminal of claim 41,

5 wherein said main controller and sub controller are operable to communicate each other, and

wherein said main controller is operable to detect abnormality in said sub controller when failing to communicate with said sub controller, and to inform a user of the abnormality by controlling an indicator to light or flicker.

10 45. An emergency information system comprising:

an emergency information terminal mounted in a vehicle having a main battery, said emergency information terminal including:

15 a first power supply circuit coupled to said main battery for supplying power; and

a second power supply circuit coupled to said main battery for supplying power; and

20 an emergency information center for receiving an emergency call signal from said emergency information terminal.

25 46. An emergency information terminal mounted in a vehicle having a main battery, for executing an emergency call notifying process to a center supervising a emergency information system, said emergency information terminal comprising:

a first power supply circuit coupled to said main battery for supplying power;

an auxiliary battery; and
a second power supply circuit coupled to said auxiliary battery for supplying power.

5 47. The emergency information terminal of claim 46,
wherein said first power supply circuit usually supplies power, and
wherein said second power supply circuit supplies power if power supply from said main battery is interrupted.

10 48. An emergency information system comprising:
an emergency information terminal mounted in a vehicle having a main battery, including
a first power supply circuit coupled to said main battery for supplying power;
15 an auxiliary battery; and
a second power supply circuit coupled to said auxiliary battery for supplying power; and
an emergency information center for receiving an emergency call signal from said emergency information terminal.

20 49. An emergency information terminal mounted in a vehicle, said emergency information terminal being capable of connecting to an external device, for placing an emergency call to a center supervising a emergency information system, said emergency information terminal comprising a first power control device is operable to supply power to said external device and to cut off the power.

50. The emergency information terminal of claim 49, wherein said first power control device is operable to cut off the power when outputting a current exceeding a predetermined current.

5 51. The emergency information terminal of claim 49, wherein said first power control device is operable to cut off supply of power when the output voltage drops less than or equal to a predetermined voltage.

10 52. The emergency information terminal of claim 49, further comprising:

a hands-free device capable of coupling a microphone for hands-free voice talk; and

a second power control device operable to supply power to said microphone,

15 wherein said second power control device is operable to cut off the power in one of cases that at least one of output voltages of said first and second power control devices drops less than or equal to a predetermined voltage, and that at least one of output currents of said first and second power control devices flows more than a predetermined current.

20 53. The emergency information terminal of claim 49, further comprising a second power control device operable to couple with a lighting device in an emergency call send button and of supplying power to said lighting device, wherein said second power control device is operable to cut 25 off the power in one of cases that at least one of output voltages of said first and second power control devices drops less than or equal to a predetermined voltage, and that at least one of output currents of said first and second

power control devices flows more than a predetermined current.

54. The emergency information terminal of claim 49, further comprising a second power control device operable to couple with a mobile handset telephone and of feeding power to said mobile handset telephone, wherein said second power control device is operable to cut off the power in one of cases that at least one of output voltages of said first and second power control devices drops less than or equal to a predetermined voltage, and that at least one of output currents of said first and second power control devices flows more than a predetermined current.

10 55. The emergency information terminal of claim 49, wherein said first power control device includes:

15 a power supply path; and

a resistance connected in series to said power supply path, wherein said first power control device is operable to cut the power when a voltage at both ends of said resistance becomes more than a predetermined voltage.

20 56. An emergency information system comprising:

an emergency information terminal mounted in a vehicle, said emergency information terminal capable of being connected to an external device, for placing an emergency call, said emergency information terminal including a first power control device operable to supply power to said external device and to cut off the power; and

25 an emergency information center for receiving the emergency call sent from said emergency information terminal.

57. An emergency information terminal mounted in a vehicle, said emergency information terminal being capable of connecting a microphone for hands-free voice talk, for placing an emergency call to a center 5 supervising an emergency information system, said emergency information terminal comprising:

a first power control device operable to supply power to inside of said emergency information terminal; and

10 a second power control device operable to supply power to said microphone.

58. The emergency information terminal of claim 57, wherein said second power control device is operable to supply power only to said microphone.

15 59. The emergency information terminal of claim 57, wherein said second power control device includes a regulator.

60. The emergency information terminal of claim 59, wherein said 20 regulator has a thermal shutoff function.

61. An emergency information system comprising:

an emergency information terminal mounted in a vehicle, said emergency information terminal being capable of connecting a microphone 25 for hands-free voice talk, said emergency information terminal including:

a first power control device operable to supply power to inside of said emergency information terminal; and

a second power control device operable to supply power to said microphone; and

an emergency information center for receiving an emergency call sent from said emergency information terminal.

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62. An emergency information terminal mounted in a vehicle, said emergency information terminal being capable of connecting a lighting device for lighting an emergency call send button, for placing an emergency call to a center supervising an emergency information system, said emergency information terminal comprising:

a first power control device operable to supply power to inside of said emergency information terminal; and

a second power control device operable to supply power to said lighting device.

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63. The emergency information terminal of claim 62, further comprising:

a microphone; and

a third power control device operable to supply power to said microphone.

64. The emergency information terminal of claim 63, wherein said third power control device has a regulator.

25 65. The emergency information terminal of claim 64, wherein said regulator has a thermal shutoff function.

66. An emergency information system comprising:

an emergency information terminal mounted in a vehicle, said emergency information terminal being capable of connecting a lighting device for lighting an emergency call send button, said emergency information terminal including:

5 a first power control device operable to supply power to inside of said emergency information terminal; and

10 a second power control device operable to supply power to said lighting device; and

15 an emergency information center for receiving an emergency call sent from said emergency information terminal.

67. An emergency information terminal mounted in a vehicle, said emergency information terminal being capable of connecting a mobile handset telephone, for placing an emergency call to a center supervising an emergency information system, said emergency information terminal comprising:

20 a first power control device operable to supply power to inside of said emergency information terminal; and

25 a second power control device operable to supply power to said mobile handset telephone.

68. The emergency information terminal of claim 67, wherein said second power control device operable to supply power only to said handset telephone.

69. An emergency information system comprising:

an emergency information terminal mounted in a vehicle, said emergency information terminal being capable of connecting a mobile handset telephone, said emergency information terminal including:

5 a first power control device operable to supply power to inside of said emergency information terminal; and

a second power control device operable to supply power to said mobile handset telephone; and

an emergency information center for receiving an emergency call sent from said emergency information terminal.

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70. An emergency information terminal mounted in a vehicle, said emergency information terminal being capable of connecting an external device, for placing an emergency call notifying process to a center supervising an emergency information system, said emergency information terminal comprising:

a power source;

a power supply path for supplying power from said power source to said external device;

a resistor connected in series to said power supply path; and

20 a transistor having collector and emitter connected in series to said power supply path, and base receiving a signal based on a voltage at both ends of said resistor, said transistor cutting off said power supply path when the voltage at both ends of said resistor exceeds a predetermined voltage.

25 71. An emergency information system comprising:

an emergency information terminal mounted in a vehicle, said emergency information terminal being capable of connecting an external

device, said emergency information terminal including:

a power source;

a power supply path for supplying power from said power source to said external device;

5 a resistor connected in series to said power supply path; and
a transistor having collector and emitter connected in series to said power supply path, and a base receiving a signal based on a voltage at both ends of said resistor, said transistor cutting off said power supply path when the voltage at both ends of said resistor exceeds a predetermined
10 voltage; and

an emergency information center for receiving an emergency call sent from said emergency information terminal.